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**PATENT**  
Attorney Docket No.: 018890-000200US  
Client Reference No.: JHU 4391

TOWNSEND and TOWNSEND and CREW LLP

By: Tracy S. Parker

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re U.S. National Phase of  
PCT/US2004/043114 of:

Saeed R. Khan

Application No.: Not yet assigned

Filed: Herewith

For: BORONIC ACID ARYL  
ANALOGS

Confirmation No.:

Examiner:

Art Unit:

**INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR §1.97 and  
§1.98**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references in compliance with the requirements of 37 CFR §1.98(a)(2) are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Also enclosed is a copy of an International Search Report dated May 17, 2005, which was filed in corresponding PCT application no. PCT/US04/043114, and in which these references were filed.

As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, because this submission is prior to the issuance of a first Office Action on the merits.

However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Kawai Lau  
Reg. No. 44,461

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60803062 v1

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
				Application Number	
				Filing Date	
				First Named Inventor	Khan, Saeed R.
				Art Unit	
				Examiner Name	
Sheet	1	of	3	Attorney Docket Number	018890-000200US

<b>U.S. PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US-			
	AB	US-			
	AC	US-			
	AD	US-			
	AE	US-			
	AF	US-			
	AG	US-			
	AH	US-			
	AI	US-			
	AJ	US-			
	AK	US-			
	AL	US-			
	AM	US-			
	AN	US-			
	AO	US-			
	AP	US-			
	AQ	US-			
	AR	US-			

<b>FOREIGN PATENT DOCUMENTS</b>						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)		
/N.C./	AS	EP	0947511	A1	10/06/1999	F. Hoffmann-La Roche AG
/N.C./	AT	PCT	WO91/17749	A1	11/28/1991	Baylor College of Medicine
/N.C./	AU	PCT	WO03/106384	A2	12/24/2003	Johns Hopkins University
	AV					
	AW					

Examiner Signature	/Nizal Chandrakumar/	Date Considered	08/03/2009
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**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<i>Complete if Known</i>	
				<i>Application Number</i>	
				<i>Filing Date</i>	
				<i>First Named Inventor</i>	Khan, Saeed R.
				<i>Art Unit</i>	
				<i>Examiner Name</i>	
Sheet	2	of	3	<i>Attorney Docket Number</i>	018890-000200US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
/N.C.	AX	KUMAR, S.K., et al. "Design, Synthesis, and Evaluation of Novel Boronic-Chalcone Derivatives as Antitumor Agents", <i>Journal of Medicinal Chemistry</i> (2003) 46(14):2813-2815		<input type="checkbox"/>
	AY	BOUGET, K., et al. "Hydrazino-Aza and N-Azapeptoids with Therapeutic Potential as Anticancer Agents", <i>Bioorganic &amp; Medicinal Chemistry</i> (2003) 11(23):4881-4889		<input type="checkbox"/>
	AZ	YANG, W., et al. "Boronic Acid Compounds As Potential Pharmaceutical Agents", <i>Medicinal Research Reviews</i> (2003) 23(3):346-368		<input type="checkbox"/>
	BA	DICESARE, N., et al. "Chalcone-analogue fluorescent probes for saccharides signaling using the boronic acid group", <i>Tetrahedron Letters</i> (2002) 43(14):2615-2618		<input type="checkbox"/>
	BB	SERAFIN, B. et al. "Arylboronic Compounds - VIII", <i>Tetrahedron</i> (1963) 19:821-826		<input type="checkbox"/>
	BC	CATLIN, Joseph C., et al. "Synthesis, Reactions, and Mass Spectral Studies of Some Cyclic Amine-Boranes and Their Catechol Derivatives", <i>The Journal of Organic Chemistry</i> (1969) 34(6):1664-1668		<input type="checkbox"/>
	BD	CATLIN, Joseph C., et al. "Preparation and Reactions of o-(Cyanomethyl)benzeneboronic Acid", <i>The Journal of Organic Chemistry</i> (1969) 34(6):1660-1663		<input type="checkbox"/>
	BE	SNYDER, H.R., et al. "Synthesis of Aromatic Boronic Acids. Aldehydo Boronic Acids and a Boronic Acid Analog of Tyrosine", <i>Journal of the American Chemical Society</i> (1958) 80:835-838		<input type="checkbox"/>
	BF	FU, J.-m, et al. "Connections to the Directed Ortho Metalation Strategy. Pd(0)-Catalyzed Cross Coupling of Aryl Boronic Acids with Aryl Triflates", <i>Tetrahedron Letters</i> (1990) 31(12):1665-1668		<input type="checkbox"/>
	BG	STRACHAN, Jon-Paul, et al. "The preparation of some 1,7b-disubstituted cyclopropa[c]isoquinolines via nitril ylide cyclisations and their rearrangement to 2-benzazepines and 4-alkenyl-1,4-dihydroisoquinolines", <i>Journal of the Chemical Society, Perkin Transactions 1</i> (1998) 13:807-812		<input type="checkbox"/>
↓	/N.C.BH	YANG, N. et al. "Nickel-Catalyzed Cross-Couplings of Cyclohexenyl Phosphate and Arylboronic Acids", <i>Tetrahedron Letters</i> (1999) 40(17):3321-3324		<input type="checkbox"/>

Examiner Signature	/Nizal Chandrakumar/	Date Considered	08/03/2009
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Substitute for form 1449B/PTO				<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				<i>Application Number</i>	
(Use as many sheets as necessary)				<i>Filing Date</i>	
				<i>First Named Inventor</i>	Khan, Saeed R.
				<i>Art Unit</i>	
				<i>Examiner Name</i>	
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/N.C.	BI	KOBAYASHI, Yuichi, et al. "Zinc Borates: Functionalized Hard Nucleophiles for Coupling Reactions with Secondary Allylic Acetates", <i>European Journal of Organic Chemistry</i> (2000) 3825-3834			<input type="checkbox"/>
	BJ	FALCK, J.R., et al "Bromo-Boronolactonization of Olefins", <i>The Journal of Organic Chemistry</i> (2001) 66(21):7148-7150			<input type="checkbox"/>
	BK	FALCK, J.R., et al. "Homocoupling of alkyl-, alkenyl-, and arylboronic acids", <i>Tetrahedron Letters</i> (2002) 43(45):8149-8151			<input type="checkbox"/>
	BL	JIANG, Weiqin, et al. "Furoyl and Benzofuroyl Pyrroloquinolones as Potent and Selective PDE5 Inhibitors for Treatment of Erectile Dysfunction", <i>Journal of Medicinal Chemistry</i> (2003) 46(3):441-444			<input type="checkbox"/>
	BM	Database Beilstein, Beilstein Crossfire Institut Zur Foerderung Der Chemischen Wissenschaften; Citation No. 2508506; BRN 488408 1991, XP002327019, Abstract & Serafin, et al: Roczniki Chemii Annales Societatis Chimicae Polonorum, (1961) 35:359-362			<input type="checkbox"/>
↓ /N.C./BN	BN	ROBERTS, David C., et al. "Pluripotential Amino Acids I. (L)-p-Dihydroxyborylphenylalanine (L-Bph) as a Precursor of L-Phe and L-Tyr Containing Peptides; Specific Tritiation of L-Phe-Containing Peptides at a Final Step in Synthesis", <i>Tetrahedron Letters</i> (1980) 21(36):3435-3438			<input type="checkbox"/>
	BO				<input type="checkbox"/>

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